FACULTY OF ARTS AND SCIENCE

CURRICULUM COMMITTEE

REPORT 44

Curriculum Change Proposals 1985-86

Undergraduate New Programmes Only

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approved by

Arts and Science Faculty Council

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for submission to

Senate

May 25, 1984.

GEOGRAPHY

New programme: B.A. Specialization in Man-Environment Relations

The Department of Geography, which offers a 42-credit B.A. Major in Man-Environment Relations, proposes to add a 60-credit B.A. Specialization programme in this field. The main rationale is to provide a programme of sufficient depth as preparation for graduate study in this field. The programme is constructed upon a foundation 33 credits of mandated Geography courses. The remaining 27 credits are distributed among selected courses, representing the natural and social sciences, including a maximum of 24 additional credits in Geography. Whereas the courses in List A are oriented towards physical geography, those in List B reflect an emphasis on cultural geography. The student will be required to take at least six credits of geography from each of the two lists reflecting the two distinct orientations. The profile for this programme will be 0.00 (see new programme attached).

No new courses or faculty resources are required to offer this programme. GEOG C267^{3} - Introductory Cartography is a new course only in the nominal sense insofar as it results from dividing the present GEOG C262^{6} - Introduction to Cartography into two three-credit courses (see below). All other geography courses included in the programme are in the current calendar and are offered on a regular basis by the department.

New course

The existing course, GEOG C262^{6} - Introduction to Cartography is being split into three-credit courses, of which only one, GEOG C267^{3} is included in the Specialization programme.

GEOG C267^{3} Introductory Cartography

GEOGRAPHY - (cont'd)

60 B.A. SPECIALIZATION IN MAN-ENVIRONMENT RELATIONS

STAGE I

15 GEOG C211[6], C267[3], C275[3], C276[3]

STAGE II

12 GEOG C305[6], C361[3], C362[3]

STAGE III

6 GEOG C405[6]

STAGES II and III

27 Chosen from List A and List B including at least 6 credits and no more than 24 credits in Geography. No more than 6 credits may be at the 200-level.

LIST A

GEOG	C371[6*], C372[6*], C470[3]
BIOL	C207[3], C240[3], C250[3], C345[3*], C351[3*], C352[3*], C353[3*], C355[3*], C450[3*], C454[3*], C458[3*], C459[3*]
CHEM	C302[2], C303[2], C313[2*], C380[2]
GEOL	C332[3*], C424[3],
PHYS	C270[3], C273[3*]

LIST B

GEOG	C315[3*], C317[3*], C357[6*], C410[3]
ECON	C391[3*], C396[3*]
POLI	C361[3], C363[3], C421[3], C461[3*], C462[6], C465[3]
SOCI	C323[3*], C324[3*], C326[6*]
SCHA	C253[3], C254[3]

* These courses have prerequisites which are not included in these lists. Please consult the calendar.

GEOLOGY

New programme: B. Sc. Specialization in Geology-Ecology

The Department of Geology proposes to replace its 44-credit B.Sc. Major in Geology (Ecology-Option) with a 78-credit B.Sc. Specialization in Geology-Ecology. The primary rationale is to provide a strong foundation in geology with an orientation toward ecology as a subdiscipline of biology. The programme is directed towards students interested in professional formation in this field. Included in the programme are 45 credits of Geology courses and 33 credits of Biology courses. Given the bi-disciplinary character of the programme, the credit limitations of the "Cohen Report" are not abrogated by the total number of credits (78) in the programme. The profile for this programme will be 10.9 (see new programme attached).

The proposed Specialization programme will require no net increase in courses or faculty resources. GEOL C224^3, C231^3, C232^3, C331^3 and C332^3, while not listed in the current calendar, are proposed new versions (for 1985-86) of existing courses.

The existing GEOL C215^3 - Photogeology is to be replaced by GEOL C224^3.

GEOLOGY C224^3 Introduction to Remote Sensing and Terrain Analysis

The existing GEOL C221^2 - Physics of the Earth is to be replaced by GEOL C231^3, which will add a laboratory component:

GEOLOGY C231^3 Physics of the Earth

The existing GEOL C223^2 - Introduction to Geochemistry, is to be replaced by GEOL C232^3, which will add a laboratory component.

GEOLOGY C232^3 Introduction to Geochemistry

The existing GEOL C310^2 - Historical Geology, is to be replaced by GEOL C331^3, which will add a laboratory component.

GEOLOGY C331^3 Historical Geology

The existing GEOL C317^2 - Earth Resources, is to be replaced by GEOL C332, which will add a laboratory component.

GEOLOGY C332^3 Economic Geology

GEOLOGY - (cont'd)

78 B.Sc. SPECIALIZATION IN GEOLOGY-ECOLOGY

STAGE I

24 GEOL C210^3, C211^3, C212^3, C213^3; BIOL C222^3, C230^3, C240^3, C250^3

STAGES II and III

24 GEOL C216^3, C224^3, C231^3, C311^6, C331^3, C332^3, C415^3

9 Chosen from GEOL C232^3 and Geology 300- and 400-level courses

18 BIOL C246^3, C270^3, C351^3, C353^3, C355^3, C450^3

3 Chosen from BIOL C321^3 and C454^3

MATHEMATICS

New programme: B.A. or B.Sc. Honours in Actuarial Mathematics

The Department of Mathematics proposes a new 66-credit B.A./B.Sc. Honours programme in Actuarial Mathematics. The existing Specialization programme in Actuarial Mathematics (there is no Major), introduced in 1982-83 has attracted a larger than expected number of students. Many of these Specialization students, who appear to be highly capable students, abandon the Specialization in favour of the Honours programme in Applied Mathematics in order to be graduated from an Honours programme. While it is still possible for them to follow a close approximation of the Actuarial Mathematics sequence within Applied Mathematics the students must forsake the official recognition as Actuarial Mathematics graduates.

The Department of Mathematics is now sufficiently committed to and experienced with actuarial mathematics that the added responsibility of an Honours Programme makes sense. There are no direct resource implications; Honours students would follow the same sequence of courses as Specialization students for the first 60 credits. The remaining six credits are chosen from courses which are offered each year in any event, and which could easily absorb the additional students. The profile for the B.A. programme will be 10.12, and for the B.Sc. programme 10.10. (See new programme below).

The Honours programme, which, with the exception of the final six credits, will be identical with the Specialization in Actuarial Mathematics, is intended to serve a dual purpose. On the one hand, it provides a solid foundation in Mathematics as an academic discipline, a foundation which should prepare the student for graduate study. On the other hand, the programme has an obvious "professional" orientation designed to prepare students to meet the standards of the Society of Actuaries for practice in the profession. Specifically, the programme is intended to prepare graduates to be able to take three of the five professional examinations set by the Society of Actuaries. This is somewhat less training on the actuarial side than is given in similar programmes elsewhere (e.g., Laval prepares graduates for four of the five examinations).* The Curriculum Committee recommends that the Department of Mathematics give consideration to developing the programme further in the direction of preparing students to meet the professional standards of the Society.

The courses which constitute the new programme are either already existing or result from the reorganization (splitting) of existing courses. Those courses which are included in the programme and which are in the nominal sense, new, are listed below.

The proposed MATH C326^3 and C327^3 result from splitting MATH C325^6 - Introduction to Life Contingencies, as follows:

MATHEMATICS C326^3	Theory of Interest
MATHEMATICS C327^3	Life Contingencies I

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* Successful completion of these five examinations qualifies one as an Associate of the Society of Actuaries.

MATHEMATICS (cont'd)

The proposed MATH C336^3 results from splitting MATH C331^6 - Deterministic Methods of Operations Research, as follows:

MATHEMATICS C336^3	Linear Programming

The proposed MATH C348^3, C448^3 result from splitting MATH C344^6 - Regression and Analysis of Variance, as follows:

MATHEMATICS C348^3	Regression and Correllation
MATHEMATICS C448^3	Analysis of Variance

The proposed MATH C443^3 results from splitting MATH C345^6 - Mathematical Statistics, as follows:

MATHEMATICS C443^3	Time Series and Forecasting

The proposed MATH C427^3 and C428^3 result from splitting MATH C425^6 Topics in Contingency Theory, Risk Theory and Mortality, as follows:

MATHEMATICS C427^3	Life Contingencies II
MATHEMATICS C428^3	Life Contingencies III

The proposed MATH C337^3 results from splitting MATH C431^6 - Probabilistic Methods of Operations Research, as follows:

MATHEMATICS C337^3	Introduction to Stochastic Methods of Operations Research

The proposed MATH C464^3, C467^3 result from splitting MATH C461^6 - Analysis, as follows:

MATHEMATICS C464^3	Real Analysis
MATHEMATICS C467^3	Measure and Integration

66 B.A. or B.Sc. HONOURS IN ACTUARIAL MATHEMATICS

57 MATH C231^3, C241^6, C261^6, C271^3, C281^6, C311^3, C326^3, C327^3, C336^3, C337^3, C348^3, C362^3, C363^3, C427^3, C448^3, C464^3

6 MATH C229^3, C329^3, C429^3

3 MATH chosen with prior departmental approval from MATH C428^3, C443^3, C467^3